LITERATURE

This column will give information about new literature, publications, books, etc.
Tips concerning new literature are welcome, and should be sent to Ed Prüst, Voorstraat 61, 3512 AK Utrecht, The Netherlands.

Atlas van de Nederlandse Amfibieën en Reptielen en hun Bedreiging; Drs. Wim Bergmans en Drs. Annie Zuiderwijk.
Stichting Uitgeverij Koninklijke Nederlandse Natuurhistorische Vereniging en Nederlandse Vereniging voor Herpetologie en Terrariumkunde 'Lacerta', 1986.

Size 23x16 cm, sewn in 4-colour wrapper, 177 pages. Illustrated with 13 tables and 55 diagrams. Distribution maps for every species and black-white photos of habitats.
Available by remittance of f 35.-- (includes postage and packing) a copy on Postal account 2036078 in the name of: "Lacerta", Jagersdreef 144, Driebergen, The Netherlands.

All the data known about the frogs, toads, newts, lizards and snakes - more than 30,000 - are made into an Atlas of the Dutch amphibians and reptiles. Until now there were important gaps in the knowledge about the distribution and status of the Dutch species. The gaps are almost completely filled with the new atlas. There is now a series of complete distribution maps for the Netherlands to show where all species have been found since 1970 where the species is absent or has disappeared
In the text the distribution patterns are interpreted, why some areas are and some are not liveable for the individual species. Some survey maps show that there are "rich" and "poor"

areas (areas where many or few different species occur respectively), for amphibians and reptiles while there are areas where species are totally absent.

Much attention is given to the present situation of the species. From the 22 species there are only 5 which are not threatened as a result of human encroaches; in spite of the fact that all 22 species are legally protected. These 5 species are not very dainty with respect to their surroundings and appear almost throughout the country. The remaining 17 species are either threatened (8 species) or seriously threatened (7 species) or very seriously threatened (3 species). These threatened species are losing ground, their habitats shrinking due to motorways or other culture deserts. The 3 very seriously threatened species (Bombina variegata, Hyla arborea and Podarcis muralis) are declining so fast that they probably will disappear from Dutch soil in the near future. The few places where these species still appear are known and being watched.
Most threats cannot be stopped, in spite of legal protection and the protection of their habitats (Convention of Bern, 1982).

In the atlas 47 different types of threats are listed. Most threats (30) come from the agricultural sector, whose policy in The Netherlands is responsible for the decline of all species and a threat to most species. Other "dangerous" sectors are the expanding towns (15 threats), traffic (14 threats) and recreation (11 threats), but there are more.
An important threat from the agricultural sector is the lowering of the ground watermark.
Of the 22 species there is only one, Podarcis

muralis, that does not suffer from this. Other threats are too recent to be sure of the effects, such as souring and poisoning of bottom and groundwater, though local effects, bodes ill for the future.

Behavioral Thermoregulation in Australian Elapid Snakes; Harvey B. Lillywhite. Copeia, 1980 (3): 452-458.

Information on behavioural thermoregulation in snakes is less readily available than similar information concerning lizards. Most information deals with Colubridae and Boidae.
Mr. Lillywhite tested the behavioural thermoregulation of seven species of Australian Elapidae, viz., Acanthophis antarcticus, Austrelaps superbus, Notechis scutatus, Pseudechis porphyriacus, Pseudonaja nuchalis, Pseudonaja textilis and Unechis flagellum.
The snakes were caught in north and south Australia and were examined in the laboratory, under equal conditions and in a terrarium in which the temperatures ranged between 18-22^{0}C and 40^{0}C under an infra-red lamp. The critical minimum temperature was taken by cooling down the animals to such a degree that the continuous movement of their tongues stopped and the animals were no longer capable of turning over when placed on their backs. All snakes appeared to present behavioural thermoregulation. It was striking that they raised their temperatures by 'sunbathing', and held their temperatures within relatively restricted boundaries, venturing very close to the source of heat now and again, while spells of inertia were spent near the source of heat. Consequently this behaviour could be indicated as the so-called commuting, for which lizards are also noted.

All species showed a preferance for temperatures of 30-35°C, within a wider tolerance-scope. Differences in endurance showed some similarity with differences in voluntary maximum-temperature (r = .577) and with critical minimum-temperatures in five out of seven examined species. The lowest temperatures could be endured by those species whose habitat was South Australia. During the heating-up process the animals changed their positions from full-length to closely coiled. In doing so, no difference in exposure of parts of the bodies was established.

The temperatures recorded did not deviate from the temperatures taken with terrestrial snakes from temperate zones.

Although there is little data on the temperatures of Elapidae under natural conditions, there is a great similarity between the existing data of those which have been kept under laboratory conditions.

The endurance of new-born or young specimens appeared to be lower than that of full-grown specimens. Possible causes:

1. *The inclinations towards clustering is stronger than the inclination towards heating-up.*
2. *The temperature of the head may be lower than the temperature of the rest of the body, and the temperatures of the young specimens were taken by putting a thermometer against their necks, whereas the temperatures of full-grown specimens was recorded by means of a transmitter inserted in their stomachs.*

Remaining causes (less plausible):

3. *The lower endurance of young specimens may be connected with ecological factors, such as the fact that, unlike the full-grown ani-*

mals, the young ones of many Colubrid species are active in the latter part of the year, which calls for them to function at lower temperatures. As far as this subject is concerned, there is little data on Elapidae.

Zu haltung und Nachzucht von *Dasypeltis scabra*; H. Kulmus. Salamandra (1984), Vol. 20 (1): 11-20.

In this comprehensive article the rearing and breeding of Dasypeltis scabra is described. The breeding started with the laying of six eggs by a newly bought female. One female, which came from this initial clutch, has laid five clutches in three years, resulting in the hatching of 44 young from 47 eggs.

Adult snakes are housed in terraria (80x50x80 cm) which have glass on three sides and fine gauze on the top side. The floor is covered with sand and earth; a 15 Watt heating-cable is buried in a part of this substrate. A thermostat keeps the sand temperature at 30°C. Heating and lighting are switched on from 07.00-19.00 hours. For lighting three neon lights are used (Tru-Lite 20 Watt, Gro-lux 25 Watt, Warm-lite 25 Watt). The terraria are sprayed once a week; relative humidity is 40-70%.

The author prefers to keep sexually mature females in separate terraria, because if housed together they are very restless and repeatedly try to escape (the author suspects that the females are trying to evade each other, this action being stimulated by the smell coming from large cloacal scent glands).

Dasypeltis scabra feeds on eggs and eggs alone (one should not try to forcefeed them with mice, snails or anything else). It is better to feed them relatively small eggs, since when a specimen swallows an egg which is too large it

is too tired to crush the shell and regurgitates the egg entire.

Snake 'size'	*Egg size*
Newly born	*Zebra finch*
Up to 30 cm	*Canary*
30 cm and larger	*Quail*
40 cm and larger	*Pigeon*
80 cm and larger	*Hen and pheasant*

Sexual maturity is reached when the snakes are 2-3 years old. Copulation often happens during the day. The first female laid eggs (8 June 1981) almost one year after the first copulations (15 June 1980) were seen. Fertile eggs are usually larger (40-45 x 15-17 mm) than infertile ones (about 30x17 mm). Incubation takes 58-65 days at 28-30^{0}C. Newly born snakes are 21-28 cm long, they slough for the first time between 1-3 weeks after hatching. The young snakes are raised in 'escape-free' terraria (70x30x40 cm) with conditions similar to the adult ones.

Starting with the second shed the males can be distinguished by their sloughed hemipenes. The first small eggs are eaten a few days after hatching, before the snake's first slough